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PROBABLE REGIONAL SAM SUPPORT AND RECYCLING INSTALLATION NEAR ZHITOMIR, USSR

INTRODUCTION

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An installation of unusual layout was observed for the first time on KEYHOLE photography of [REDACTED] at 50-11N 29-05E, about 17 nautical miles (nm) east-southeast of Zhitomir, 8 nm south-southeast of Korostyshev, and 55 nm west-southwest of Kiev (Figure 1). At that time this installation was designated as a probable missile-handling and support installation, possibly to serve the MRBM launch sites in the Gomel', Ovruch, Uman', and Stanislav/Kamenets-Podol'skiy areas. Subsequently, KEYHOLE photography of [REDACTED] permitted a

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comparative photographic study as well as a re-evaluation of the function of the installation. The very small scale of the photography, the lack of stereographic coverage, the great amount of target halation, and scattered clouds greatly limit the amount of observable detail and preclude precise measurements of facilities. At the time of previous coverage of the area during World War II, the Zhitomir installation did not exist. A village observed on [REDACTED] photography, just southwest of the present site has since been dismantled.

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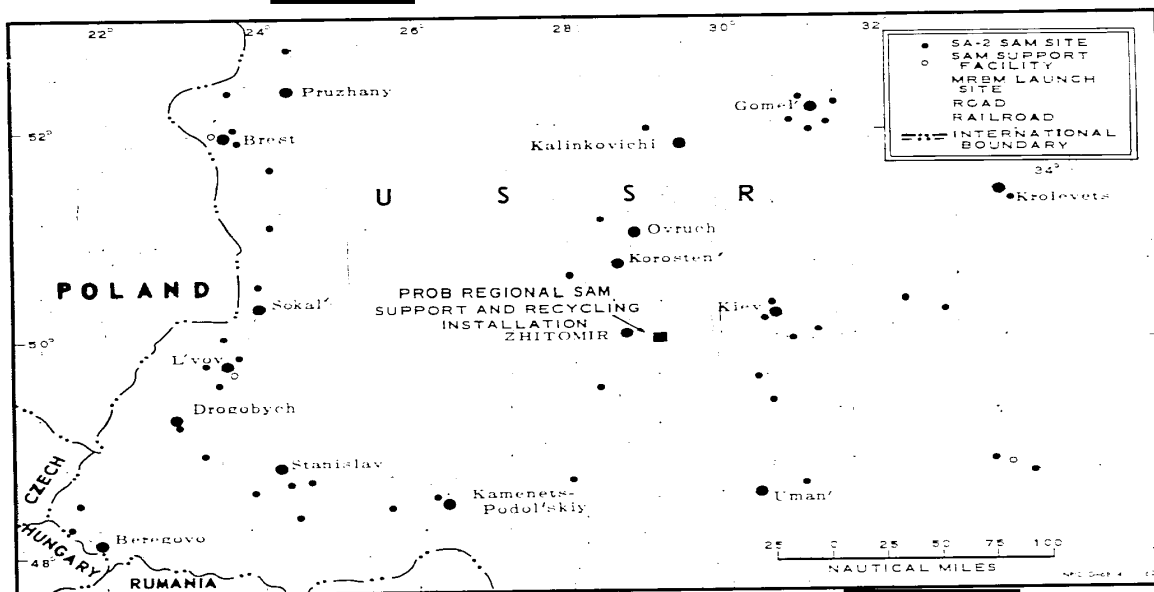


FIGURE 1. AREA ORIENTATION MAP. Features shown are as of [REDACTED]

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The facilities in the Zhitomir installation were studied carefully and compared with other possibly related installations to determine if they were intended for use for MRBMs, SAMs, short-range tactical missiles, or unconventional weapons at airfields. A further comparison was made with the Berdichev Regional Military Storage Installation [REDACTED]

[REDACTED] about 37 nm west-southwest of the Zhitomir installation; the Istra SAM Storage Site, 25 nm from the center of Moscow; other SAM storage and support facilities near Moscow and Leninigrad; an unidentified installation near Nizhniye

Sergi, 40 nm west of Sverdlovsk at 56-50N 59-25E; [REDACTED]

[REDACTED] and in the lower Volga area of the USSR; and pertinent support facilities at the Kapustin Yar/Vladimirovka Missile Test Center.

The Zhitomir installation, which is in a region containing numerous SAM and MRBM launch sites, is well supplied logistically and appears to be newly constructed in a heavily wooded area just north of the Zhitomir-Kiev road and railroad. Detailed analysis of the installation based on KEYHOLE photography of [REDACTED] follows:

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DETAILED ANALYSIS

The Zhitomir Probable Regional SAM Support and Recycling Installation is composed of three principal areas: a Probable Assembly and Checkout Area, an Explosives-Storage Area, and a Probable Technical Support and Housing Area (Figures 2 and 3).

PROBABLE ASSEMBLY AND CHECKOUT AREA

This area is rectangular, measures approximately 2,530 by 2,420 feet, and is enclosed by a single security fence. It lies 11,000 feet north of the Zhitomir-Kiev road and railroad and is served by both a road and rail spur. An east-west road provides direct connection with two rail transloading points. Along the east-central section of the fenced area are four rectangular, drive-through assembly-type buildings, each 210 by 135 feet, arranged in a single row about 65 feet apart. Distinctive wide concrete aprons, each approximately 170 by 135 feet, serve the buildings along the north and south sides. These aprons curve gently where they meet the access roads. It is believed that major assembly of the

missile components -- shipped from the fabrication centers -- could be performed in these buildings. It is here also that the missiles would be disassembled during periodic recycling.

Just to the south of the four assembly-type buildings are four other rectangular drive-through buildings approximately 335 by 100 feet that probably are used for subassembly or checkout of missile components. These buildings are 70 feet apart and are road served at right angles along the north and south sides. The buildings are unusual in that on the north side they appear to extend across the road, thus providing a probable shelter for offloading. The exact limits of these shelters are not clearly discernible; however, the maximum length including the building is approximately 400 feet. Just to the south of the easternmost building is a concrete apron 140 feet square. To the south of the two westernmost buildings is an unidentified cleared area with no discernible structures. Three long, narrow, rectangular buildings of undetermined dimensions are situated just west of the probable assembly and checkout buildings and probably are used for storage. Two short spur roads

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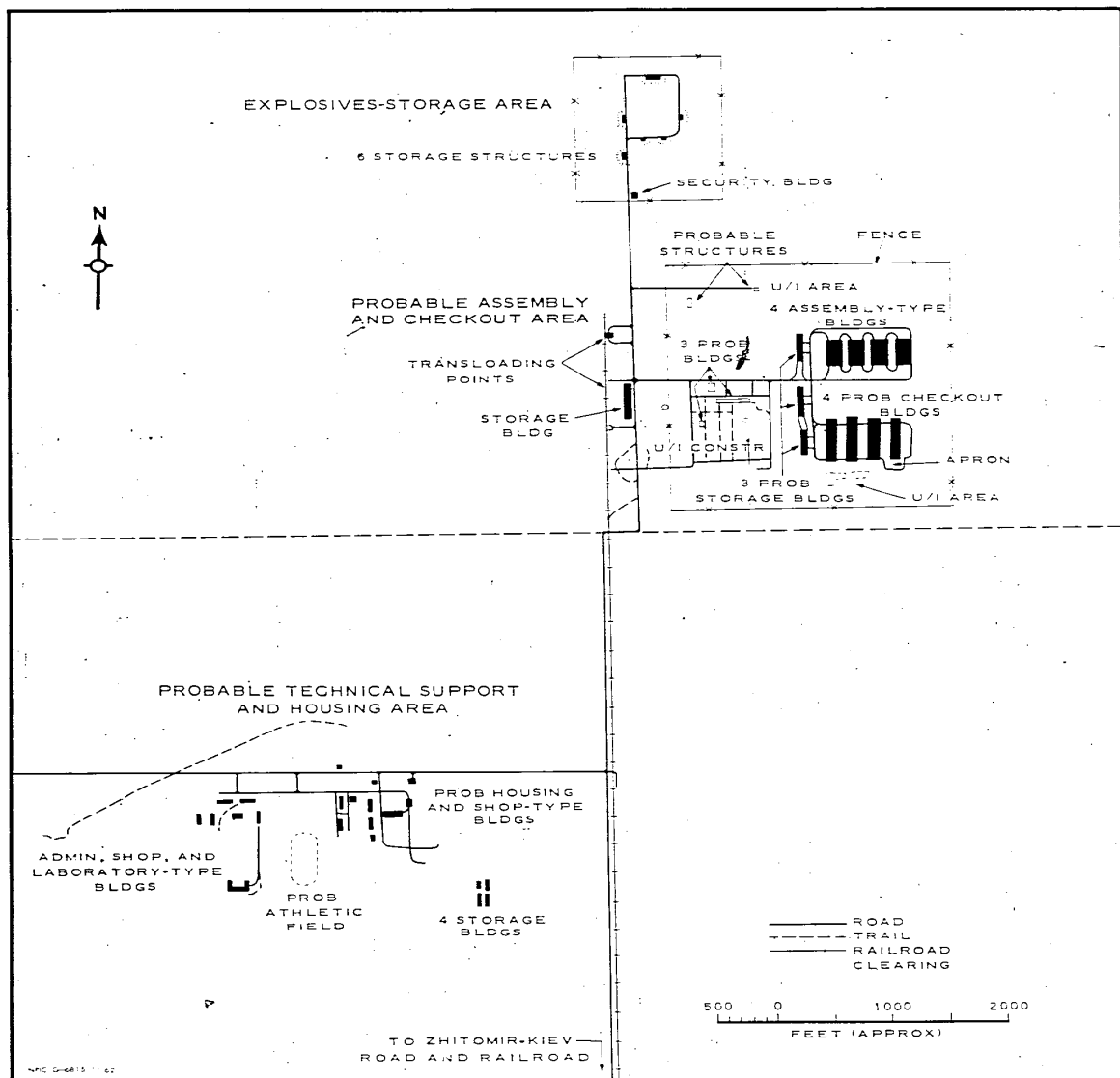


FIGURE 2. FACILITIES AT THE PROBABLE REGIONAL SAM SUPPORT AND RECYCLING INSTALLATION NEAR ZHITOMIR.

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enter each of the buildings from the east. The northern building has an apron along the south side, and the other two buildings appear to share an apron located between them.

An unidentified rectangular area, measuring about 920 by 550 feet, lies just west of the probable checkout buildings. It is served by four short spur roads off the main east-west road. Individual features are very difficult to identify but the area appears to consist of three probable buildings of varying size and shape and construction of an undetermined nature.

In the northwestern part of the fenced area, close to its north boundary and approximately 640 feet northwest of the assembly-type buildings is an unidentified area that has been observed only on largely cloud covered and hazy photography. This area is served by a single spur road off the main north-south road but does not appear to be connected directly by road to other facilities within the enclosure. Two contiguous rectangular road patterns are discernible, one smaller than the other. Also visible are two probable structures that may be drive-through. The function of this area cannot be determined. It is possible that it serves as a depot for storage of oxidizer and kerosene supplies for those SAM sites in the immediate area for which no immediate support facilities have been identified.

Just west of the Probable Assembly and Checkout Area is an unsecured transloading facility served along the west by rail and along the east by the main north-south access road of the installation. It consists of a northern and a southern transloading point. The southern, and principal, transloading point has a 330-foot-long storage building with associated service apron. Three east-west roads extend from this transloading point to the main north-south road, the northernmost continuing directly into the Probable Assembly and Checkout Area.

The northern transloading point is served by

a loop road off the main north-south road. The loop road is not as wide as those serving the southern transloading point. It is possible that explosives are offloaded here and trucked to the Explosives-Storage Area just to the north.

EXPLOSIVES-STORAGE AREA

The Explosives-Storage Area is situated just north of the Probable Assembly and Checkout Area and measures 1,720 by 1,270 feet. It is enclosed by a single fence and has a security building at the entrance. It lies at the terminus of the access road that serves the Probable Assembly and Checkout Area but appears to have no rail service. Five storage structures are situated around a rectangular loop road and a sixth lies along the main road just south of the junction of the loop road. All six structures appear to be either bunkers with aprons or buildings revetted on three sides with an apron on the fourth side. The largest of the structures lies along the northern segment of the loop road; one medium-size structure lies along the western segment and one along the access road; and three small structures lie along the southern and eastern segments of the loop road. Further details and mensuration are not possible because of indistinct photography. A large, irregularly shaped clearing 740 feet east of the Explosives-Storage Area does not appear to be associated with this facility.

Discernible components and the similarity of layout to that of other storage areas indicate that this area is used for storage of conventional warheads, booster components, and fuses.

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PROBABLE TECHNICAL SUPPORT AND HOUSING AREA

This area, which appears to be under construction, is an unfenced installation situated in a

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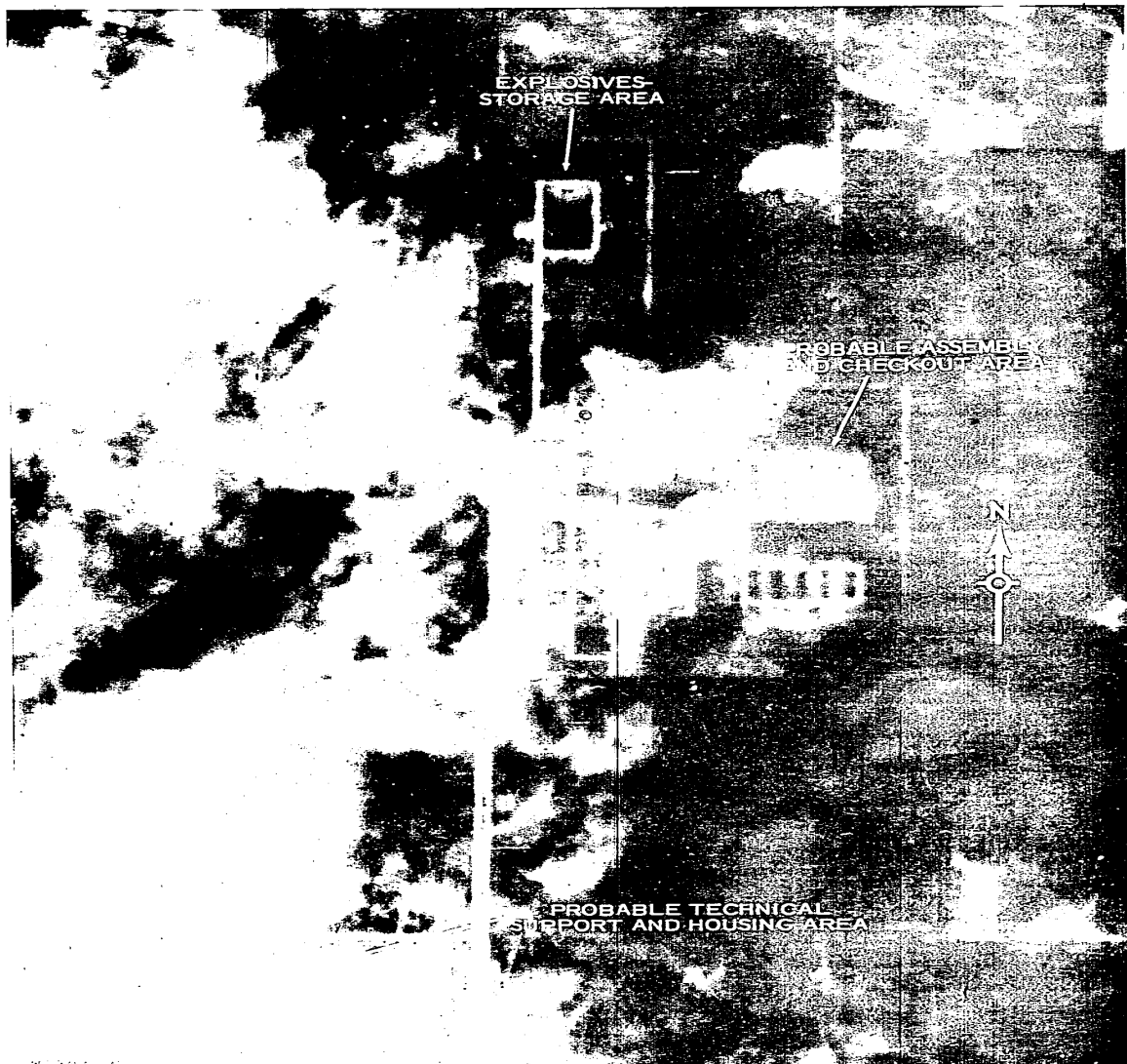


FIGURE 3. PROBABLE ASSEMBLY AND CHECKOUT AREA AND EXPLOSIVES-STORAGE AREA OF THE PROBABLE REGIONAL SAM SUPPORT AND RECYCLING INSTALLATION NEAR ZHITOMIR

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heavily wooded area. It measures approximately 4,840 by 1,700 feet. It has a direct east-west road connection to the main access road. The Probable Assembly and Checkout Area lies about 2,500 feet to the north of the junction of the two roads, and the Zhitomir-Kiev road and railroad lie about 8,500 feet to the south. The area contains an unusual road pattern characterized by short spur roads, some of which have wide-radius, 90-degree turns. Very few of the facilities in the area have been constructed along the main east-west road. For the most part they are concentrated just to the south of a road that is south of and parallel to the main east-west road. The majority of the facilities observed in the area are rectangular and of varying size. A number of the buildings have either end or side drive-through capability.

Although details of configuration are difficult to ascertain because of clouds, haze, and lack of stereographic coverage, the area can be divided roughly into two main sections: an eastern section composed largely of probable housing and

shop-type buildings and a probable athletic field; and a western section composed of administration, shop, and laboratory-type buildings.

Four storage buildings just to the southeast of the area proper appear to be remnants of the former village. In the eastern section of the area, four buildings measuring approximately 125 by 60 feet probably are used for housing. The other buildings in this section appear to be shops or general support buildings. The probable athletic field, which lies near the center of the area, is approximately 400 by 175 feet.

Seven buildings can be identified in the western section of the area, the largest being a U-shaped administration-type building in the southwest part of the area. The base of this building measures 190 by 45 feet and each leg 65 by 45 feet. Numerous clearings, either the sites of former buildings now dismantled or sites for future construction, are observed. The general configuration of the area suggests that it probably is used for modification and laboratory-type operations as well as for housing.

CONCLUSIONS

Logistically any one of a number of missile systems could be serviced by the Zhitomir installation. The installation is served from the Zhitomir-Kiev road and railroad by a newly constructed road and rail spur which feed into the general transportation network of the area, thus providing good, although indirect, access to all the known missile-related installations in the area, including SAM and MRBM installations.

Although the installation is located so as to be able to service the numerous MRBM launch sites in the area, the bulk of evidence negates association of this installation with such sites. Continuing study of the MRBM launch sites in this area reveals that, in addition to the ready build-

ing near the launch pad, most of the sites have other handling facilities nearby, including one large drive-through building, presumably to satisfy certain MRBM checkout requirements. None of these handling facilities correspond in size or configuration to buildings observed at the Zhitomir installation. It is noteworthy that, despite the relatively wide photographic coverage of MRBM sites in the USSR, the installation at Zhitomir is the only one of its kind observed thus far in the entire MRBM area of operation. Preliminary comparative study of the Zhitomir installation with an unidentified installation near Nizhniye Sergi west of Sverdlovsk indicates a certain degree of similarity between the two in-

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stallations. No conclusions can be drawn from these data until completion of a detailed study of the Nizhniye Sergi installation. The Nizhniye Sergi facility, however, is beyond the operational range of the MRBM and gives no evidence of association with the generally self-supporting ICBM launch complexes in the same area. Also, facilities at the Zhitomir installation do not resemble pertinent MRBM checkout facilities observed at the Kapustin Yar/Vladimirovka Missile Test Center.

25X1 Components of the Berdichev Regional Military Storage Installation [REDACTED]

25X1 [REDACTED] do not resemble the Zhitomir installation, and no relationship between the two is apparent from photography. Furthermore, the Zhitomir installation appears to be too elaborate for the needs of the limited number of airfields in the area that have unconventional weapons. Similarly, it does not seem to be related to the short-range, tactical-type missile. Facilities at the Zhitomir installation are not similar to those serving the short-range SSM launch sites at the Kapustin Yar/Vladimirovka Missile Test Center. The large motor transport area for missile carriers normally associated with this type of weapon is not present, at least not to date. The possibility of the installation serving a mobile system or a number of different kinds of missiles was considered but rejected.

The Zhitomir installation has been compared not only with the Istra SAM Storage Site but also with other SAM storage sites in the Moscow area. A number of similarities are discernible, including the general configuration of such distinctive features as the assembly-type buildings with wide aprons. The degree of similarity to the Istra Site and other SAM storage sites around Moscow tends to support an association with SAMs. Direct and indirect evidence pointing toward SAM association, considerably

stronger than toward any other association, is sufficient to designate the Zhitomir installation as a Probable Regional SAM Support and Recycling Installation. It is very well situated and appears to be equipped with the appropriate type of facilities and with adequate logistic support for servicing the SAM launch sites within a large regional area.

The configuration and layout of the facilities comprising this probable regional SAM handling installation suggest a number of functions. It could serve as an intermediate facility between fabrication centers and the immediate SAM support sites and, ultimately, launch sites. Missile components would be sent here for subassembly, final assembly, and checkout. The missile would then probably be sent to conventional immediate support facilities for immediate checkout and mating of the boosters and fuses, and then to the launch site for mating of the warhead. The installation could probably serve also as a site for recycling and modification of SAMs returned periodically from the launch pads. Furthermore, for those SAM launch sites in the Zhitomir-Kiev area which are presumably lacking the immediate support facility, such support could be provided by the Zhitomir installation. [REDACTED]

[REDACTED] none of the conventional type of immediate SAM support facility was observed on partial coverage within a radius of 170 nm of this installation. However, subsequent cloud-free photography of the area may reveal the presence of existing support facilities of this type or the construction of new ones.

The operational limits of the Zhitomir facility cannot be ascertained from photography. It is possible that other generally similar installations will appear subsequently in relatively small numbers to service SAM launch sites in other parts of the USSR.

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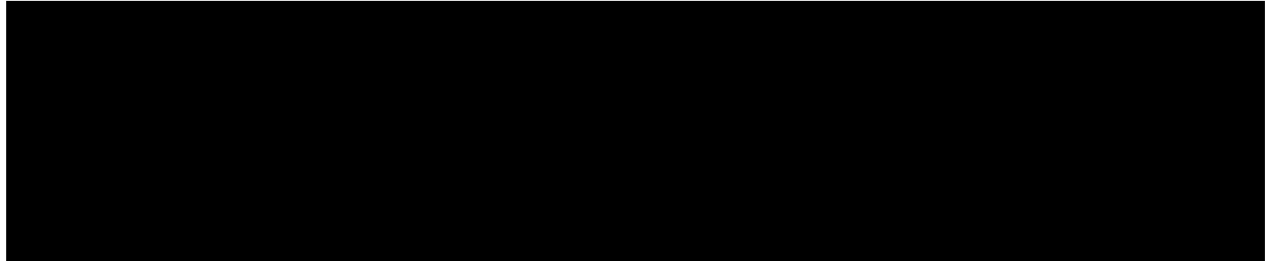
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REQUIREMENT

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